Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A catalyst for use in a NO_x trap, the catalyst comprising:

a precious metal;

an oxygen storage component in contact with the precious metal in an amount that provides sufficient oxygen storage capacity to limit the NO_x release from the NO_x trap during rich purges to less than 20% of the NO_x that is stored in the NO_x trap across the operating temperature window of the trap, increase the NO_x conversion efficiency under stoichiometric conditions to a value greater than 70%, and increase sulfur tolerance such that the drop in the NO_x storage efficiency averaged over one minute of lean operation is less than 30% when the NO_x trap is contacted with a gaseous composition containing about 9 ppm sulfur dioxide at 400°C for 10 hours; and

a NO_x storage material.

2. (Original) The catalyst of claim 1 wherein the sufficient amount of the oxygen storage component in contact with the precious metal is attained by limiting the contact between the precious metal catalyst and the oxygen storage component.

3. (Original) The catalyst of claim 2 wherein:

the precious metal is contained in a first layer disposed over a substrate; and

the oxygen storage component is contained in a second layer disposed over the first layer wherein the contact between the precious metal and the oxygen storage component is limited to an interface between the first layer and the second layer.

4. (Original) The catalyst of claim 2 wherein the precious metal and the oxygen storage component are combined in a single layer, the oxygen storage component being in a sufficient concentration that the oxygen storage capacity of the NO_x

trap is from about 30 micromoles of oxygen per gram of catalyst to about 90 micromoles of oxygen per gram of catalyst at 500°C.

5. (Original) The catalyst of claim 4 wherein the single layer further includes the NO_x storage material.

6. (Original) The catalyst of claim 1 wherein the oxygen storage component comprises one or more oxides selected from the group consisting of Rare Earth metal oxides, Group III metal oxides, Group IV metal oxides, and Group V metal oxides.

7. (Original) The catalyst of claim 6 wherein the oxygen storage component comprises ceria.

8. (Original) The catalyst of claim 6 wherein the amount of oxygen storage component in contact with the precious metal is achieved by reducing the oxygen storage capacity of the oxide.

9. (Original) The catalyst of claim 8 wherein the oxygen storage component comprises a pre-sintered oxide.

10. (Original) The catalyst of claim 1 wherein the oxygen storage capacity of the NO_x trap at 500°C is from about 30 micromoles of oxygen per gram of catalyst to about 90 micromoles of oxygen per gram of catalyst.

11. (Original) The catalyst of claim 1 wherein the oxygen storage capacity of the NO_x trap at 500°C is from about 40 micromoles of oxygen per gram of catalyst to about 80 micromoles of oxygen per gram of catalyst.

12. (Original) The catalyst of claim 1 wherein the oxygen storage capacity of the NO_x trap at 500°C is about 60 micromoles of oxygen per gram of catalyst.

13. (Original) The catalyst of claim 1 wherein the precious metal is platinum, palladium, rhodium, ruthenium, or mixtures thereof.

14. (Original) The catalyst of claim 1 wherein the NO_x storage material comprises a component selected from the group consisting of an alkaline earth metal, an alkali metal, and mixtures thereof.

15. (Original) The catalyst of claim 1 wherein the catalyst is applied to a support material by a washcoat, the washcoat comprising:

10 wt % to about 25 wt % of the oxygen storage component; and

5 grams per cubic foot to 150 grams per cubic foot of the precious metal.

16. (Original) A catalyst for use in a NO_x trap, the catalyst comprising:

a precious metal;

an oxygen storage component in contact with the precious metal in an amount such that oxygen storage capacity of the NO_x trap at 500°C is from about 30 micromoles of oxygen per gram of catalyst to about 90 micromoles of oxygen per gram of catalyst; and

a NO_x storage material.

17. (Original) The catalyst of claim 16 wherein the oxygen storage capacity of the NO_x trap at 500°C is from about 40 micromoles of oxygen per gram of catalyst to about 80 micromoles of oxygen per gram of catalyst.

18. (Original) The catalyst of claim 16 wherein the oxygen storage capacity of the NO_x trap at 500°C is about 60 micromoles of oxygen per gram of catalyst.

19. (Original) The catalyst of claim 16 wherein the oxygen storage component in contact with the precious metal is present in an amount that is attained by limiting the contact between the precious metal catalyst and the oxygen storage component.

20. (Original) The catalyst of claim 19 wherein:

the precious metal is contained in a first layer disposed over a substrate; and

the oxygen storage component is contained in a second layer disposed over the first layer wherein the contact between the precious metal and the oxygen storage component is limited to an interface between the first layer and the second layer.

21. (Original) The catalyst of claim 19 wherein the precious metal and the oxygen storage component are combined in a single layer.

22. (Original) The catalyst of claim 21 wherein the single layer further includes the NO_x storage material.

23. (Original) The catalyst of claim 16 wherein the oxygen storage component comprises one or more oxides selected from the group consisting of Rare Earth metal oxides, Group III metal oxides, Group IV metal oxides, and Group V metal oxides.

24. (Original) The catalyst of claim 23 wherein the oxygen storage component comprises ceria.

25. (Original) The catalyst of claim 23 wherein the oxygen storage component in contact with the precious metal is in an amount that is achieved by reducing the oxygen storage capacity of the oxygen storage component.

26. (Original) The catalyst of claim 25 wherein the oxygen storage component comprises a pre-sintered oxide.

27. (Original) The catalyst of claim 16 wherein the precious metal comprises a component selected from the group consisting of platinum, palladium, rhodium, ruthenium and mixtures thereof.

28. (Original) The catalyst of claim 16 wherein the NO_x storage material comprises a component selected from the group consisting of an alkaline earth metal, an alkali metal, and mixtures thereof.

29. (Original) A NO_x trap comprising:

a precious metal;

ceria in contact with the precious metal in an amount that provides sufficient oxygen storage capacity to reduce the NO_x release from the NO_x trap during rich purges to less than 20% of the NO_x that is stored in the NO_x trap across the operating temperature window of the NO_x trap, increase NO_x conversion efficiency under stoichiometric conditions to a value greater than 70%, and increase sulfur tolerance such that the drop in the NO_x storage efficiency averaged over one minute of lean operation is less than 30% when the NO_x trap is contacted with a gaseous composition containing about 9 ppm sulfur dioxide at 400°C for 10 hours; and

a NO_x storage material.

30. (Original) The NO_x trap of claim 29 wherein the oxygen storage capacity of the catalyst is from about 30 micromoles of oxygen per gram of catalyst to about 90 micromoles of oxygen per gram of catalyst at 500°C.

31. (Original) The NO_x trap of claim 29 wherein the oxygen storage capacity of the catalyst is from about 40 micromoles of oxygen per gram of catalyst to about 80 micromoles of oxygen per gram of catalyst at 500°C.

32. (Original) The catalyst of claim 29 wherein the oxygen storage capacity of the NO_x trap is about 60 micromoles of oxygen per gram of catalyst at 500°C.